C11 CADD Notes

See the Office of Bridges and Structures web site for archived Methods Memos listed under articles in this section.

The Methods Memos for which policies have been partially revised and/or for which document references have been updated are noted as partially revised. Any obsolete Methods Memos that apply to this section are listed at the end.

C11.1 General

C11.1.1 Sheet name conventions

C11.1.2 Note cell libraries

C11.1.3 Note organization

C11.1.4 Abbreviations

C11.1.5 References

C11.2 Project

C11.2.1 Index

Methods Memo No. 195 (Stub abutment design behind MSE walls) Revision to Article 6.5.1.1.2 LRFD Bridge Design Manual
1 October 2008

~~**Methods Memo No. 157: HS25 Loading on Substructures**~~
~~**4 January 2007**~~

Methods Memo No. 205: Update CADD Note E50D
1 August 2008

C11.2.2 Listing

~~**Methods Memo No. 157: HS25 Loading on Substructures**~~
~~**4 January 2007**~~

Methods Memo No. 205: Update CADD Note E50D
1 August 2008

Memo 0 and Additional Articles-2011 ~ Increase Class C Concrete Strength to 4.0 ksi
In recent years the typical concrete strengths achieved by Class C concrete have been greater than the 3500 psi used for design. For structural components a higher strength concrete would be advantageous, and for a few of the longer prestressed concrete beams 4.0 ksi concrete is required for the bridge deck. After checking with state and district materials engineers it was decided to increase the design strength for Class C concrete to 4.0 ksi for design, except when a higher strength is required. The increase in design strength also requires an increase in minimum flexural strength to 575 psi for form removal. The change from psi to ksi units for design strength is consistent with the transition to AASHTO LRFD Specifications.

Methods Memo No. 195 (Stub abutment design behind MSE walls) Revision to Article 6.5.1.1.2 LRFD Bridge Design Manual
1 October 2008

C11.3 New bridge

C11.3.1 Index

Methods Memo No. 174: Bridge Plan Deck Dimension Table
4 September 2007

Methods Memo No. 177: CADD Note E234/M234 for Surface Preparation for Two Course Decks
1 October 2007

~~**Methods Memo No. 157: HS25 Loading on Substructures**~~
~~**4 January 2007**~~

Partially revised: Methods Memo No. 156: Revised Longitudinal Grooving Notes
4 January 2007

~~**Methods Memo No. 197: Revision to E/M 202 - Embedded Deck Hangers in PPCB**~~
~~**1 May 2008**~~

Methods Memo No. 189: Revision to CADD Note E189/M189
1 March 2008

Methods Memo No. 132: Delete CADD Note E134/M134, Supersedes MM No. 126
8 July 2005 (MM No. 126 has been moved to the appendix for this commentary section.)

Partially revised: Methods Memo No. 143: Longitudinal Grooving for Bridge Decks, Bridge Approaches, Bridge Deck Overlays, & Overlay of Bridge Approaches
23 November 2005

Methods Memo No. 223: Value Engineering Note
1 February 2010

C11.3.2 Listing

Methods Memo No. 212: Revision to Standard CADD Note E101/M101 – Existing Structure, Field Verify Dimensions
1 April 2009

~~**Methods Memo No. 157: HS25 Loading on Substructures**~~
~~**4 January 2007**~~

Methods Memo No. 223: Value Engineering Note
1 January 2010

Methods Memo No. 174: Bridge Plan Deck Dimension Table
4 September 2007

Methods Memo No. 132: Delete CADD Note E134/M134, Supersedes MM No. 126
8 July 2005 (MM No. 126 has been moved to the appendix for this commentary section.)

Partially revised: Methods Memo No. 138: Revision to 91 – Temporary Shoring Adjacent to Roadway
6 July 2005

Partially revised: Methods Memo No. 91: Temporary Shoring Adjacent to Roadway (See MM No. 138 above for revisions.)
24 March 2005

The following information on temporary shoring is from Methods Memo No. 91. The revisions in Methods Memo No. 138 were to Notes E171/M171 and E172/M172, and those notes have been corrected in the manual.

To help clarify the use of temporary shoring the following guidelines using zones of excavation have been adopted. See also Figure 1. "Temporary Shoring Excavation Classification Line" for details of the temporary shoring limits and zones.

Zone 1: If room is available for the contractor to temporarily slope the embankment back from the edge of shoulder at a minimum slope of 1.5 to 1, then no submittal for shoring is required. For situations where traffic is shifted to the shoulders, consideration should be given to shoring or slope stability. The temporary slope of 1.5:1 is limited to heights of less than 20 ft. (6000 mm) unless a global stability analysis is performed.

Zone 2: When excavation less than 5 ft. (1500 mm) is required adjacent to the roadway, shoring shall be provided by the contractor. Shoring plans will be the responsibility of the contractor and shall be submitted for approval. Plan note E171 shall be used. The degree of formal review will be at the judgment of the RCE.

Zone 3: When excavation 5 ft. (1500 mm) and more is required adjacent to the roadway, shoring shall be required and a professional engineer shall seal the design. The department will review the design and details for approval. Plan note E172 shall be used. The Lump Sum "Temporary Shoring" bid item shall be used.

Also see the flow chart for the approval process.

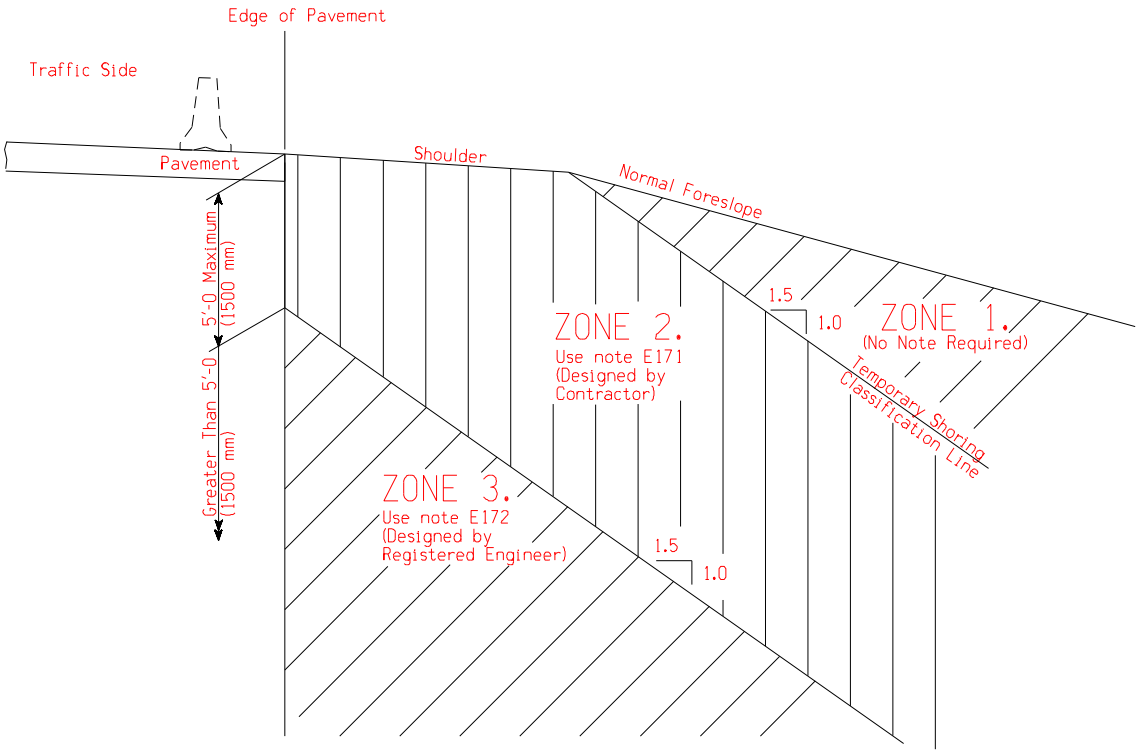

Figure 1. Temporary Shoring Excavation Classification Line

The Soils Design Section, should be the first to review the temporary shoring plans submitted. The Soils Design Section will review the contractor's soils assumption and the applied load generated. The Office of Bridges and Structures will then review the shoring system to verify the loads do not exceed the allowable stresses on the temporary shoring system and will check for adequacy of the details. See Figure 2 for a flowchart of the temporary shoring plan review.

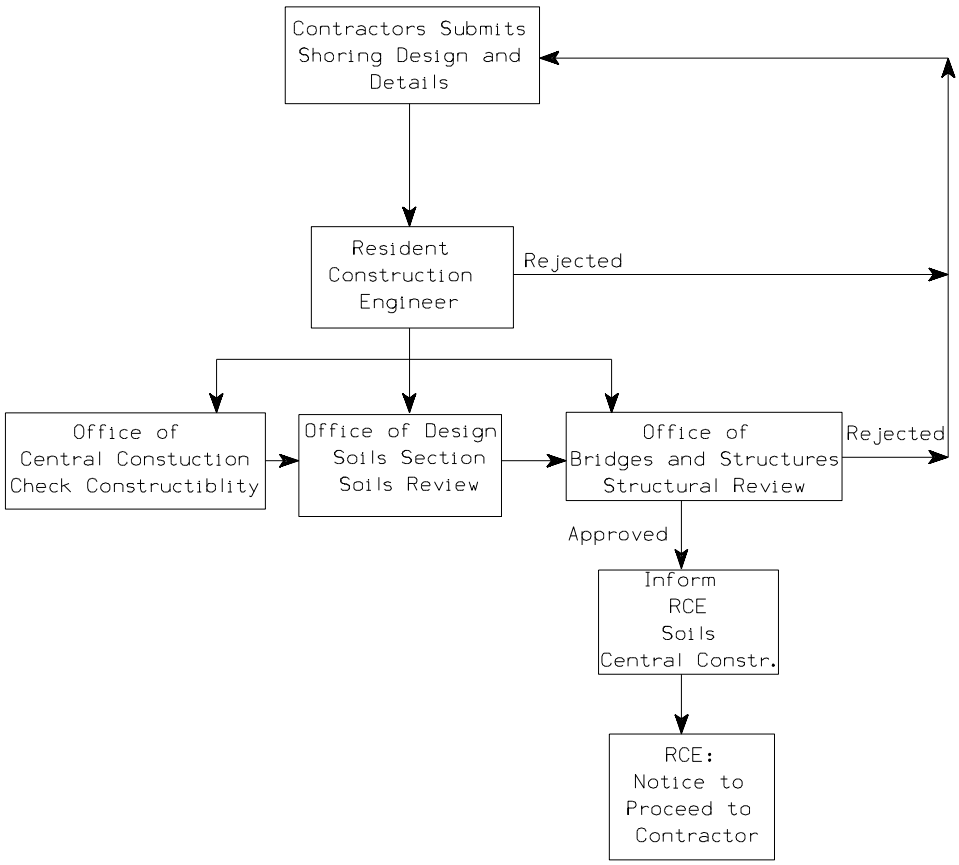

Figure 2 - Temporary Shoring Plan Review Flowchart for Zone 3 approval

Methods Memo No. 140: New Plan Note E175/M175, "Waiting Period for Driving Piles"
2 November 2005

Partially revised: Methods Memo No. 150: Revision to CADD Note E188/M188
9 March 2006 (This memo supersedes Methods Memo No. 110. Article 2513.03B was replaced with Article 2513.03, A, 2, in the 2009 Standard Specifications. ~ 17 June 2009)

Methods Memo No. 189: Revision to CADD Note E189/M189 (This memo supersedes MM No. 129.)
1 March 2008

~~**Methods Memo No. 197: Embedded Deck Hanger Forms in PPCB**~~
~~**1 May 2008**~~

Partially revised: Methods Memo No. 156: Revised Longitudinal Grooving Notes (This memo partially supersedes MM No. 143. CADD Note E208/M208 no longer is valid because longitudinal grooving is covered in the Iowa DOT Standard Specifications.)
4 January 2007

Partially revised: Methods Memo No. 143: Longitudinal Grooving for Bridge Decks, Bridge Approaches, Bridge Deck Overlays, & Overlay of Bridge Approaches (This memo supersedes MM No. 128 and 118.)
23 November 2005

Partially revised: Methods Memo No. 121: Use of Special Concrete Mixes on Bridges

8 July 2005

Methods Memo No. 187: Void CADD Note E923/M923
1 January 2008

Methods Memo No. 177: CADD Note E234/M234 for Surface Preparation for Two Course Decks
1 October 2007

C11.4 Future notes

C11.4.1 Index

C11.4.2 Listing

C11.5 Bridge repair

C11.5.1 Index

Methods Memo No. 199: Revision to CADD Note E461/M461
1 May 2008

Partially revised: Methods Memo No. 206: Revision for E463/M463
1 October 2008

Methods Memo No. 204: General Note on Keyway Dimensions
1 October 2008

C11.5.2 Listing

Methods Memo No. 204: General Note on Keyway Dimensions
1 October 2008

Methods Memo No. 183: Policy Regarding Construction Loading
1 January 2008

Methods Memo No. 213: Revision to E450/M450 Commentary
1 April 2009

Methods Memo No. 199: Revision to CADD Note E461/M461
1 May 2008

Partially revised: Methods Memo No. 206: Revision for E463/M463
1 October 2008 (The note was revised to replace Article 2403.21 with Article 2403.03, P, in the 2009 Standard Specifications. ~ 17 June 2009)

Methods Memo No. 188: Revisions to CADD Notes E470, M470, E471/M471, and E473/M473
1 January 2008

C11.6 Future notes

C11.6.1 Index

C11.6.2 Listing

C11.7 Culvert

C11.7.1 Index

C11.7.2 Listing

C11.8 Bridge substructure

C11.8.1 Index

Partially revised: Methods Memo No. 166: Revisions to CADD Notes E832/M832 and Bid Item Reference Note
6 April 2007

Partially revised: Methods Memo No. 153: Pile Driving over Waterways
6 April 2007

C11.8.2 Listing

Methods Memo No. 117: Pile Cutoff for Battered Piles
20 July 2005

Partially revised: Methods Memo No. 166: Revisions to CADD Notes E832/M832 and Bid Item Reference Note
6 April 2007 (The word section was replaced with the word article. ~ 17 June 2009)

Partially revised: Methods Memo No. 153: Pile Driving over Waterways
6 April 2007 (In the manual the note was split into two notes so that the metric note would have correct units 24 November 2009.)

C11.9 Bridge superstructure

C11.9.1 Index

Methods Memo No. 158: Anchor Bolt Placement
15 November 2006

Methods Memo No. 202: Revision to Deck Placement Notes
1 October 2008

Methods Memo No. 131: Continuous Welded Plate Girder Butt-Welded Flange Splice Substitutions
17 August 2006

C11.9.2 Listing

Methods Memo No. 131: Continuous Welded Plate Girder Butt-Welded Flange Splice Substitutions
17 August 2006

Methods Memo No. 158: Anchor Bolt Placement
15 November 2006

Partially revised: Methods Memo No. 144: Revised Policy for Transverse Joints for CCS and PPCB Bridges
1 February 2008 (This memo was superseded by MM No. 202 and is obsolete except for item 2.)

Methods Memo No. 202: Revision to Deck Placement Notes for Prestressed Concrete Beam Bridges
1 October 2008 (This memo supersedes MM No. 144.)

C11.10 New and repair bridge detail

C11.10.1 Index

Methods Memo No. 171: Revised CADD Note E1020/M1020
27 July 2007

C11.10.2 Listing

Methods Memo No. 171: Revised CADD Note E1020/M1020
27 July 2007

C11.11 Estimate reference

C11.11.1 Index

C11.11.2 Listing

Obsolete: Methods Memo No. 118: Longitudinal Grooving of Bridge Decks
6 April 2005 (The notes in this memo have been superseded by the notes in MM No. 128 and MM No. 143.)

Obsolete: Methods Memo No. 126: Notification for Removal of Bridges
22 April 2005 (The E134/M134 note has been withdrawn. See MM No. 132.)

Obsolete: Methods Memo No. 128: Revised Longitudinal Grooving of Bridge Decks Plan Note
3 June 2005 (Notes E202 and M202 have been superseded by the notes in MM No. 143.)

Obsolete: Methods Memo No. 129: Reinforcing Designation on Plans
8 July 2005 (This note has been replaced by notes in MM No. 189, 1 March 2008.)

Obsolete: Methods Memo No. 142: LRFD Plan Specification Notes
8 November 2005 (These notes have been revised for HS25 loading and concrete strengths. See MM No. 157.)

Obsolete: Methods Memo No. 157: HS25 Loading on Substructures
4 January 2007

Obsolete: Methods Memo No. 167: CADD Note E54/M54 for 404 Permits
25 April 2007 (These notes were voided by MM No. 193, 1 March 2008.)

Obsolete: Methods Memo No. 197: Embedded Deck Hanger Forms in PPCB
1 May 2008